REMARKS

This is amendment is submitted in response to the non-final Office Action of July 7, 2009 in the above-identified application. In that Office Action, the Examiner rejected claims 1 - 20 under 35 U.S.C §102(e) as anticipated by Rhoads Published U.S. App. 2002/0080996.

Subsequent to the Office Action, on October 14, 2009, an interview was held at the U.S. Patent and Trademark Office, attended by Examiner Shahid Kamal, Mr. Calvin Hewett, a supervisor of Examiner Kamal's, and the inventor, Dan Thaxton. Also participating in the interview by telephone was James F. Gottman, the attorney prosecuting the instant application. The inventor demonstrated the invention for Messrs. Kamal and Hewett, afterwhich a discussion was had among the participants regarding the rejection and the disclosure of the Rhoads reference. Mr. Hewett raised the questions of whether the claims of the instant application comply with 35 U.S.C. §101, and whether the claims of the instant application are patentable in view of U.S. Pat. No. 6,631,473, to Townsend, a prior art reference which was not then of record. To insure that the Townsend patent is of record, applicant is now submitting a Supplemental IDS herewith. During the interview, Mr. Hewett offered to review any claims that applicant might wish to submit prior to filing a response to the Office Action.

Accordingly, applicant sent Examiner Kamal a set of claims via facsimile on November 2, 2009. Subsequently, on November 17, 2009, Examiner Kamal called the undersigned and indicated that the claims should include an appropriate number of references to the computer performing the claimed method. In response to that suggestion, additional changes have been made to the claims, which changes are now included in the formal amendment of the claims which is accomplished in the prior section of this response. As discussed, below, the claims have been amended to insure that they are statutory, under 35 U.S.C. §101, as set out in the INTERIM EXAMINATION INSTRUCTIONS FOR EVALUATING SUBJECT MATTER ELIGIBILITY UNDER 35 U.S.C. §101, dated August 2009. These claims track examples given in the

PowerPoint presentation on the INTERIM EXAMINATION INSTRUCTIONS presented by a number of USPTO personnel, including Andrew Hirshfeld. It is further believed that these claims are also clearly patentable over the Townsend reference.

Turning first to the rejection of claims 1 - 20 under 35 U.S.C §102(e) as anticipated by Rhoads Published U.S. App. 2002/0080996, it is submitted that this rejection is not appropriate with regard to the claims now pending in the instant application, and was also not appropriate to the claims as they existed at the time that the rejection was made. In point of fact, the Rhoads reference does not disclose many of the elements of the claims. The present application is directed to a computer readable medium and a computer performed method for presenting a user with a comprehensive set of security features for a security document, for assisting the user in identifying and dealing with potential incompatibilities associated with selected security features, for selecting a combination of security features for a security document, and for determining a document security rating for a document having those security features. Examples of such security features used on a printed security document include, but are not limited to, pantographs, screens, tamper protection, flourishes, overt authentication, and covert authentication. The computer displays a selection guide for the simple selection of desired security features for the design of a security document. After the user selects desired security features, the computer examines those selected security features for possible incompatibilities. The computer then presents any potential problems to the user with a description of the concerns. Additionally, the computer provides the user with recommended courses of action to resolve these concerns. After changes are made to address the incompatibilities, the system provides the user with an assessment of how well the selected security features address the desired goal of the user for the level of security. The computer gives the user a numerical rating, providing a quantified assessment of the security of the document.

The Rhoads system does not do any of this. Rather, Rhoads describes processes of embedding machine-readable multi-bit binary information in a document in

ways that do not make the binary information apparent to a human observer. As an example, Rhoads suggests embedding the value of a piece of currency in the currency image. As a further example, Rhoads suggests embedding the Social Security Number of an individual in an image, such as a watermark, on the individual's passport. Rhoads does not provide a quantified assessment of the security of a document. Rhoads does not address compatibility of various types of security features. It is submitted that the claims now, and as previously presented, as clearly patentable over Rhoads, and in no way anticipated by Rhoads.

Turning to the issue of whether the claims pending in the instant application constitute statutory subject matter, it is submitted that they specify the invention in a manner that is clearly within the bounds defined by 35 U.S.C. §101, and "machine or transformation" test delineated in *Bilski v. Kappos*, 545 F.3d 943 (Fed.Cir. 2009). To assist the Examiner in this consideration, appended to this amendment is a copy of the Interim Examination Instructions for "Evaluating Subject matter Eligibility Under 35 U.S.C. §101" promulgated by Andrew H. Hirshfeld, Acting Deputy Commissioner for Patent Examination Policy on August 24, 2009. Also appended to this amendment is the PowerPoint presentation that Commissioner Hirshfeld prepared to explain the Interim Examination Instructions.

With respect to claim 1 of the instant application, the Examiner's attention is directed to page 15 of the PowerPoint instructions, where the eligibility of the following, similar claim is analyzed:

Claim 5. A method of evaluating search results, comprising:

–sorting the results into groups based on a first characteristic;

–ranking the results based on a second characteristic; and

–comparing, using a microprocessor, the ranked results to a predetermined list of desired results to evaluate the success of the search.

It will be noted that the claim is considered limited to a particular machine because under the broadest reasonable interpretation, the microprocessor must be programmed in a particular manner to perform the claimed comparing step. Further, the machine imposes a meaningful limit and is more than insignificant extra-solution activity, because the step of comparing is central to the method invented by the applicant. As a consequence, the claim is considered eligible.

Similarly, with regard to claim 1, this claim should be considered limited to a particular machine because under the broadest reasonable interpretation, the "computer" must be programmed in a particular manner to perform all five of the recited steps (not just one step, as in the example, above): "processing data," "determining compatibility issues," "revising said selected security features of said document," "evaluating said relative rating information of said selected security features using said computer to determine a document security rating," and "presenting said document security rating." Further, the machine imposes a meaningful limit and is more than insignificant extra-solution activity, because these steps are central to the method invented by the applicant. As a consequence, the claim, and the claims depending therefrom, should be considered eligible for patent protection.

With respect to claim 20 of the instant application, the Examiner's attention is directed to page 10 of the PowerPoint instructions, where the eligibility of the following, similar claim is analyzed:

Claim 3. A non-transitory computer-readable storage medium with an executable program stored thereon, wherein the program instructs a microprocessor to perform the following steps:

–sorting results of a search into groups based on a first characteristic;

–ranking the results based on a second characteristic using a mathematical formula [f]; and

–comparing the ranked results to a predetermined list of desired results to evaluate the success of the search.

It will be noted that this claim is considered directed to a manufacture, since it is an article, a non-transitory storage medium. The claim recites a judicial exception, a mathematical algorithm, but is directed to a practical application, as evidenced by the tangible embodiment of the computer-readable storage medium. Finally, the claim is not directed to substantially all practical applications of the mathematical algorithm, as there are other substantial uses of the algorithm than using it in evaluating search results in a program stored on the particular claimed manufacture. As there are other ways to use the algorithm, for example, with different programmed steps, not every use is covered by the claim. The claim is therefore considered eligible.

Claim 20, in the instant application, is modeled on this example claim and is eligible for precisely the same reasons. Claim 20 should be considered directed to a manufacture, since it is an article, a "non-transitory" storage medium. The claim recites a judicial exception, a mathematical algorithm, but is directed to a practical application, as evidenced by the tangible embodiment of the computer-readable storage medium. Finally, the claim is not directed to substantially all practical applications of the mathematical algorithm, as there are other substantial uses of the algorithm than using it in evaluating relative rating information in a program stored on the particular claimed manufacture. As there are other ways to use the algorithm, for example, with different programmed steps, not every use is covered by the claim. The claim should therefore be considered eligible. It is submitted that all of the pending claims are eligible for patent protection.

Turning to the Townsend reference, it is clear that the claims pending in the instant application are neither anticipated nor rendered obvious by Townsend. Townsend relates to a method of selecting a security model for an organizations computer network. Townsend has nothing whatsoever to do with documents, let alone a process by which the security of documents is evaluated. In point of fact, for instance, Townsend does not disclose a single step in the method recited in claim 1, or claim 20. Townsend relates to computer system security, not document security, and using it as a

basis for refusing allowance of the instant claims under either 35 U.S.C. §102 or 35 U.S.C. §103 would not be appropriate.

It is submitted that all of the claims in the instant application are now in condition for allowance. Early notice of favorable action is respectfully requested.

Respectfully submitted,

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MEMORANDUM

DATE: August 24, 2009

TO: TC Directors

FROM: Andrew H. Hirshfeld
Acting Deputy Commissioner for Patent Examination Policy

SUBJECT: **Effective Today: New Interim Patent Subject Matter Eligibility Examination Instructions**

Effective today, the attached "Interim Examination Instructions For Evaluating Subject Matter Eligibility Under 35 U.S.C. § 101" are applicable and should be used during examination. These Instructions supersede previous guidance on subject matter eligibility that conflicts with the Instructions, including MPEP 2106(IV), 2106.01 and 2106.02.

INTERIM EXAMINATION INSTRUCTIONS FOR EVALUATING SUBJECT MATTER ELIGIBILITY UNDER 35 U.S.C. § 101

I. OVERVIEW

The state of the law with respect to subject matter eligibility is in flux. The following interim instructions are for examination guidance pending a final decision from the Supreme Court in *Bilski v. Kappos*. These examination instructions do not constitute substantive rulemaking and hence do not have the force and effect of law. Rejections will be based upon the substantive law, and it is these rejections that are appealable. Consequently, any perceived failure by Office personnel to follow these instructions is neither appealable nor petitionable.

35 U.S.C. § 101 establishes the threshold for patentability by setting requirements for subject matter that is eligible for patenting. To pass the threshold eligibility inquiries of § 101 for patent protection, a claimed invention must be directed to statutory subject matter and must be useful. (§ 101 also provides the basis for the prohibition against double patenting.) Thus, under § 101 two separate patent eligibility considerations are raised: (1) subject matter and (2) utility.

To evaluate utility or the real world use of an invention, follow the detailed "utility" guidelines in MPEP 2107. Following the utility guidelines, the claims and supporting disclosure must be reviewed to evaluate whether the claimed invention has an asserted or well-established utility that is specific, substantial and credible. The usefulness of the invention must be commensurate with the broadest reasonable interpretation of the claimed invention in light of the specification as it would be interpreted by one of ordinary skill in the art.

This document includes instructions for evaluating subject matter eligibility and, for the interim, should be used for examining claims under 35 U.S.C. § 101 for subject matter eligibility. Since the subject matter eligibility guidelines set forth in MPEP 2106 were prepared, case law has developed that has necessitated revision to the guidelines. The following instructions supersede previous guidance on subject matter eligibility that conflicts with the Instructions, including MPEP 2106(IV), 2106.01 and 2106.02.

Subject Matter Eligibility: There are two criteria for determining subject matter eligibility and both must be satisfied. The claimed invention (1) must be directed to one of the four statutory categories, and (2) must not be wholly directed to subject matter encompassing a judicially recognized exception, as defined below. The following two step analysis is used to evaluate these criteria.

1. **Step 1: Is the claim directed to one of the four patent-eligible subject matter categories: process, machine, manufacture, or composition of matter?**

The subject matter of the claim must be directed to one of the four subject matter categories. If it is not, the claim is not eligible for patent protection and should be rejected under § 101, for at least this reason.

A summary of the four categories of invention, as they have been defined by the courts, are:

i. Process – an act, or a series of acts or steps that are tied to a particular machine or apparatus or transform a particular article into a different state or thing.

ii. Machine – a concrete thing, consisting of parts, or of certain devices and combination of devices. This includes every mechanical device or combination of

mechanical powers and devices to perform some function and produce a certain effect or result.

iii. Manufacture – an article produced from raw or prepared materials by giving to these materials new forms, qualities, properties, or combinations, whether by hand-labor or by machinery.

iv. Composition of matter – all compositions of two or more substances and all composite articles, whether they be the results of chemical union, or of mechanical mixture, or whether they be gases, fluids, powders or solids, for example.

Non-limiting examples of claims that are not directed to one of the statutory categories:

i. Transitory forms of signal transmission (for example, a propagating electrical or electromagnetic signal *per se*).

ii. A naturally occurring organism.

iii. A human *per se*.

iv. A legal contractual agreement between two parties.

v. A game defined as a set of rules.

vi. A computer program *per se*.

vii. A company.

A claim that covers both statutory and non-statutory embodiments (under the broadest reasonable interpretation of the claim when read in light of the specification and in view of one skilled in the art) embraces subject matter that is not eligible for patent protection and therefore is directed to non-statutory subject matter. Such claims fail the first step and should be rejected under § 101, for at least this reason. For example, a claim to a computer readable medium that can be a compact disc or *a carrier wave* covers a non-statutory embodiment and therefore should be rejected under § 101 as being directed to non-statutory subject matter.

If the claimed invention is clearly not within one of the four categories, it is not patent eligible. However, when the claim fails under Step 1 and it appears from applicant's disclosure that the claim could be amended to be directed to a statutory category, Step 2 below should still be conducted.

2. **Step 2: Does the claim wholly embrace a judicially recognized exception, which includes abstract ideas, mental processes or substantially all practical uses (pre-emption) of a law of nature or a natural phenomenon, or is it a particular practical application of a judicial exception?**

In addition to the terms abstract ideas, mental processes, laws of nature and natural phenomena, judicially recognized exceptions have been described using various other terms, including physical phenomena, scientific principles, systems that depend on human intelligence alone, disembodied concepts, and disembodied mathematical algorithms and formulas, for example. The exceptions reflect the courts' view that the basic tools of scientific and technological work are not patentable.

The claimed subject matter must not be wholly directed to a judicially recognized exception. If it is, the claim is not eligible for patent protection and should be rejected under § 101. However,

a claim that is limited to a particular practical application of a judicially recognized exception is eligible for patent protection. A "practical application" relates to **how** a judicially recognized exception is applied in a real world product or a process, and not merely to the result achieved by the invention. When subject matter has been reduced to a particular practical application having a real world use, the claimed practical application is evidence that the subject matter is not abstract, not purely mental and does not encompass substantially all uses (pre-emption) of a law of nature or a natural phenomenon.

II. PARTICULAR PRACTICAL APPLICATION

A. Machines, manufactures, and compositions of matter (products)

If the claimed product falls within one of the three product categories of invention and does not recite judicially excepted subject matter, e.g., an abstract idea, a mathematical algorithm, a law of nature, or a natural phenomenon, it qualifies as eligible subject matter. If a judicial exception is recited in the claim, it must be determined if the judicially excepted subject matter has been practically applied in the product.

Eligible machines, manufactures, and compositions of matter are non-naturally occurring products typically formed of tangible elements or parts that embody a particular or specific, tangible practical application of the invention. Thus, for these product categories, a particular practical application is often self-evident based on the claim limitations that define the tangible embodiment. This is because an idea that is tangibly applied to a structure is no longer abstract, and a law of nature or natural phenomenon that is practically applied to a structure is limited to that particular application of the concept. For example, a cup is the tangible application of the abstract idea of containing a liquid and is one limited embodiment of that idea (which is no longer abstract). As another example, a magnetic door latch is the tangible application of the concept of magnetism and does not wholly embrace the concept of magnetism but, rather, is one limited application of the concept.

A claim that includes terms that imply that the invention is directed to a product, for instance by reciting "a machine comprising…", but fails to include tangible limitations in accordance with its broadest reasonable interpretation is not limited to a practical application, but rather wholly embraces or encompasses the concept upon which the invention is based. This is impermissible as such claim coverage would extend to every way of applying the abstract idea, law of nature or natural phenomenon.

A claim that includes judicially excepted subject matter and whose broadest reasonable interpretation is directed to a man-made tangible embodiment (i.e., structure) with a real world use is limited to a practical application (the subject matter has been practically applied). The reason is that the claim as a whole must be evaluated for eligibility in the same manner that a claim as a whole is evaluated for patentability under §§ 102, 103 and 112.

Once a practical application has been established, the limited occurrence of preemption must be evaluated to determine whether the claim impermissibly covers substantially all practical applications of the judicially excepted subject matter. If so, the claim is not patent-eligible. If the claim covers only a particular practical application of the judicially excepted subject matter, it is patent eligible.

Judicially excepted subject matter is often claimed as descriptive material. Descriptive material should be evaluated to determine if the material has a functional relationship to the underlying structure in order to evaluate whether it creates a patentable distinction over the prior art or whether it is merely non-functional descriptive material that creates no patentable distinction. For example, printed matter on an object or mere data (e.g., music) stored in a memory is typically non-functional descriptive material that would not create a patentable distinction over the prior art. Conversely, a printed circuit board or a computer programmed with executable instructions is typically construed as a base structure combined with functional descriptive material that could create a patentable distinction over the prior art.

The following examples show the difference between a tangible embodiment that is evidence of a particular practical application and an abstract concept that has no practical application.

(a) A claim that is directed to a machine comprising a plurality of structural elements that work together in a defined combination based on a mathematical relationship, such as a series of gears, pulleys and belts, possesses structural limitations that show that it is a tangible embodiment, providing evidence that the mathematical relationship has been applied (a practical application). Additionally, that tangible embodiment is limited by the claimed structure and would not cover all substantial practical uses of the mathematical relationship. The claim would be eligible for patent protection.

(b) On the other hand, a claim that is directed to a machine ("What is claimed is a machine that operates in accordance with F=ma.") and includes no tangible structural elements under the broadest reasonable interpretation, covers the operating principle based on a mathematical relationship with no limits on the claim scope. Thus, as no tangible embodiment is claimed, there would be no evidence of a practical application. The claim would wholly embrace the mathematical concept of F=ma and would not be eligible subject matter.

(c) As another example, a claim to a non-transitory, tangible computer readable storage medium *per se* that possesses structural limitations under the broadest reasonable interpretation standard to qualify as a manufacture would be patent-eligible subject matter. Adding additional claim limitations to the medium, such as executable instructions or stored data, to such a statutory eligible claim would not render the medium non-statutory, so long as the claim as a whole has a real world use and the medium does not cover substantially all practical uses of a judicial exception. The claim as a whole remains a tangible embodiment and qualifies as a manufacture. As explained above, the additional claim limitations would be evaluated in terms of whether they distinguish over the prior art.

B. Processes (methods)

A process claim, to be statutory under § 101, must pass the machine-or-transformation test (M-or-T test), which ensures that the process is limited to a particular practical application. Thus, not every claimed method qualifies as a statutory process. The test ensures that the process is not simply claiming an abstract idea, a mental process or substantially all practical uses of (pre-empting) a law of nature or a natural phenomenon.

In accordance with the **M-or-T test**, the claimed process must:

(1) be tied to a particular machine or apparatus (machine implemented); or

(2) particularly transform a particular article to a different state or thing.

A method claim that does not require machine implementation or does not cause a transformation will fail the test and should be rejected under § 101.

However, the mere presence of a machine tie or transformation is not sufficient to pass the test. When a machine tie or transformation has been identified, it must be further determined that the tie is to a **particular** machine or the particular transformation is of a **particular** article.

Additionally, the particular machine tie or particular transformation must meet two corollaries to pass the test for subject matter eligibility. First, the use of the particular machine or transformation of the particular article must impose a **meaningful limit** on the claim's scope. So, a machine tie in only a field-of-use limitation would not be sufficient. Second, the use of the particular machine or the transformation of the particular article must involve **more than insignificant "extra-solution" activity**. If the machine or transformation is only present in a field-of-use limitation or in a step that is only insignificant "extra-solution" activity, the claim fails the M-or-T test, despite the presence of a machine or a transformation in the claim.

Using the terms within the machine-or-transformation test:

A "machine" is a concrete thing, consisting of parts, or of certain devices and combination of devices. This includes every mechanical device or combination of mechanical powers and devices to perform some function and produce a certain effect or result. This definition is interpreted broadly to include electrical, electronic, optical, acoustic, and other such devices that accomplish a function to achieve a certain result. The machine should implement the process, and not merely be an object upon which the process operates. The claim should be clear as to how the machine implements the process, rather than simply stating "a machine implemented process". The machine limitations should make clear that the use of the machine in the claimed process imposes a meaningful limitation on the claim's scope. An "apparatus" does not have a significantly different meaning from a machine and can include a machine or group of machines or a totality of means by which a designated function or specific task is executed.

An "article" includes a physical object or substance. The physical article or substance must be particular, meaning it can be specifically identified. An article can also be electronic data that represents a physical object or substance. For the test, the data should be more than an abstract value. Data can be specifically identified by indicating what the data represents, the particular type or nature of the data, and/or how or from where the data was obtained.

"Transformation" of an article means that the "article" has *changed* to a different state or thing. Changing to a different state or thing usually means more than simply using an article or changing the location of an article. A new or different function or use can be evidence that an article has been transformed. Manufactures and compositions of matter are the result of transforming raw materials into something new with a different function or use. Purely mental processes in which thoughts or human based actions are "changed" are not considered an eligible transformation. For data, mathematical manipulation *per*

se has not been deemed a transformation; but, transformation of electronic data has been found when the nature of the data has been changed such that it has a different function or is suitable for a different use.

A "particular" machine or apparatus or transformation of a "particular" article means that the method involves a *specific* machine or article, not any and all machines or articles. This ensures that the machine or transformation imposes real world limits on the claimed method by limiting the claim scope to a particular practical application.

For computer implemented processes, the "machine" is often disclosed as a general purpose computer. In these cases, the general purpose computer may be sufficiently "particular" when programmed to perform the process steps. Such programming creates a new machine because a general purpose computer, in effect, becomes a special purpose computer once it is programmed to perform particular functions pursuant to instructions from program software. To qualify as a particular machine under the test, the claim must clearly convey that the computer is programmed to perform the steps of the method because such programming, in effect, creates a special purpose computer limited to the use of the particularly claimed combination of elements (i.e., the programmed instructions) performing the particularly claimed combination of functions. If the claim is so abstract and sweeping that performing the process as claimed would cover substantially all practical applications of a judicial exception, such as a mathematical algorithm, the claim would not satisfy the test as the machine would not be sufficiently particular.

A "field-of-use" limitation does not impose *actual boundaries* on the scope of the claimed invention. A field-of-use limitation merely indicates that the method is for use in a particular environment, such as "for use with a machine" or "for transforming an article", which would not require that the machine implement the method or that the steps of the method cause the article to transform. A field-of-use limitation does not impose a meaningful limit on the claimed invention.

Insignificant "extra-solution" activity means activity that is not central to the purpose of the method invented by the applicant. For example, gathering data to use in the method when all applications of the method would require some form of data gathering would not impose a meaningful limit on the claim.

III. Interim Examining Procedure for Subject Matter Eligibility Determinations

Based on the guidance above, the following procedure should be followed during examination:

1. Determine the meaning of the claim.

Initially, the meaning of the claim as a whole must be determined using the "broadest reasonable interpretation" standard, which requires that the claims be given their broadest reasonable interpretation consistent with the specification and consistent with the interpretation that those skilled in the art would reach. See MPEP 2111 for a complete discussion of claim interpretation. See also MPEP 2111.02 for how to determine whether a preamble limits a claim.

2. Determine if the claim as a whole falls within one of the four categories of invention (Step 1 in section I above).

When the claim has been properly interpreted, conduct Step 1 to determine if the claim falls within one of the four statutory categories of invention. If the claim covers subject matter outside of the four categories, reject the claim because it is directed to non-statutory subject matter. Additionally, in the interest of compact prosecution, if it appears from the specification that the claim could be amended to fall within a statutory category, it is suggested to proceed to Step 2 to evaluate practical application.

3. Determine if the claim as a whole is directed to a particular practical application of a judicial exception (abstract idea, law of nature or natural phenomenon) or a judicial exception in its entirety (Step 2 in section I above).

a. Products (see the attached flowchart and the discussion above regarding practical application):

When no judicially excepted subject matter is present in a claim and the claim satisfies Step 1, the subject matter of the claim is statutory (patent-eligible).

When a judicially recognized exception is present in the claim, determine if the claim recites structural limitations for it to qualify as a practical application of the judicial exception. A man-made tangible embodiment with a real world use is evidence of a practical application. If the claim does not recite a tangible embodiment (has no practical application), reject the claim as being directed to non-statutory subject matter. If the claim recites a tangible embodiment, the next step is to confirm that the claim does not cover substantially all practical uses of the judicial exception (the limited occurrence of preemption). When the claim is limited to a particular practical application (i.e., no preemption is found), the claim is directed to statutory subject matter and is eligible. If preemption is found because substantially all practical uses of the judicial exception are covered, the claim should be rejected under § 101 because it is directed to non-statutory subject matter.

b. Processes (see the attached flowchart and the discussion above regarding practical application):

For ease of implementation of this interim guidance, conduct the machine-or-transformation test for all method claims. For purposes of efficiency, it is recommended that the claim be first evaluated for the presence of the prong (M or T) most likely to be satisfied in the particular technological field because once one prong is satisfied, it is not necessary to evaluate the claim under the other prong. For example, in the mechanical and electrical arts, it may be more likely that a process is machine implemented, while in the chemical arts it may be more likely that a process results in a transformation of a substance.

Using the broadest reasonable interpretation of the claim, identify a machine or transformation, either explicitly or inherently, in the claim.

If no machine or transformation is present, reject the claim because it is directed to non-statutory subject matter as it does not qualify as a statutory process and state on the record that no machine or transformation is present in the claim. Additional explanation should be provided if it could be argued that a machine or transformation is inherent to the claim but is not required under the broadest reasonable interpretation.

If a machine or transformation is present, determine if the machine or article is "particular". If the machine or article transformed covers all machines or transformation of all articles and/or cannot be specifically identified, it is not "particular". Reject the

claim because it is directed to non-statutory subject matter as it does not qualify as a statutory process. State on the record why the machine or article is not "particular".

If a particular machine or transformation of a particular article is found, confirm that the particular machine or transformation meets the two corollaries. (1) Confirm that the use of the particular machine or the transformation of the particular article imposes a meaningful limitation on the claim's scope by, for example, being present in more than a mere field-of-use limitation. (2) Confirm that the use of the particular machine or the transformation of the particular article involves more than insignificant extra-solution activity. If a particular machine or transformation is not found and it appears from applicant's disclosure that the claim could be amended to include a particular machine or transformation, in the interest of compact prosecution, the corollaries should also be addressed.

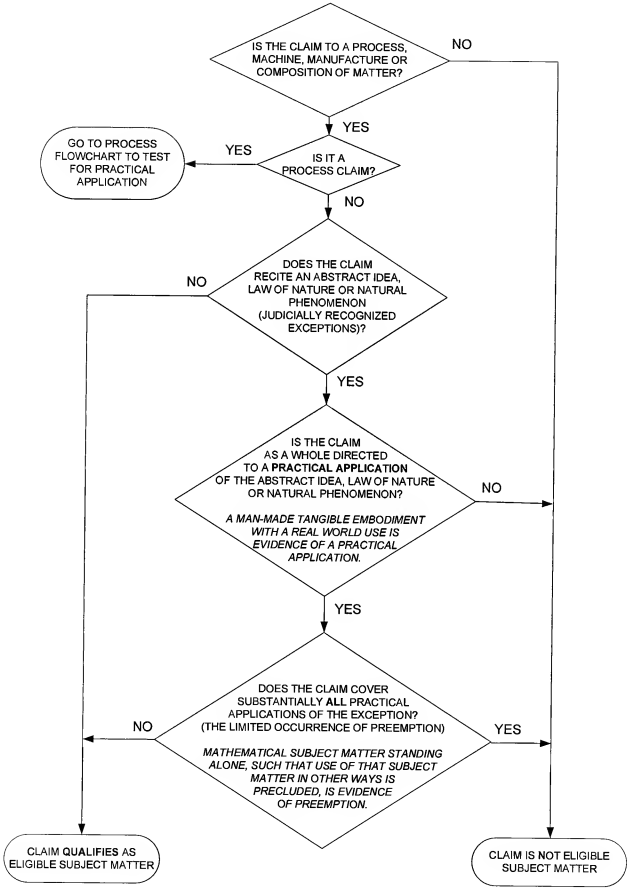
If the corollaries are confirmed, the claim is a statutory process. If the corollaries are not met, reject the claim because it is directed to non-statutory subject matter as it does not qualify as a statutory process. State on the record why the machine or transformation is not adequate to pass the test (e.g., the method does not pass the machine-or-transformation test as the [identify the particular machine or transformation] [does not impose a meaningful limit on the claim's scope or merely involves extra-solution activity in this method] because [provide specific reasons]).

When the machine or article is inherently, and not explicitly, required by the claimed method, and the examiner believes that the record of the prosecution as a whole does not make clear that the method involves a particular machine or a particular article, the examiner should identify the inherent machine on the record. The record should also be clear as to which step (or steps) invokes the machine or article. Such reasoning may be stated on the record, preferably as early as possible during prosecution. Such reasoning, if provided, will assist in understanding the broadest reasonable interpretation given to the claim during examination.

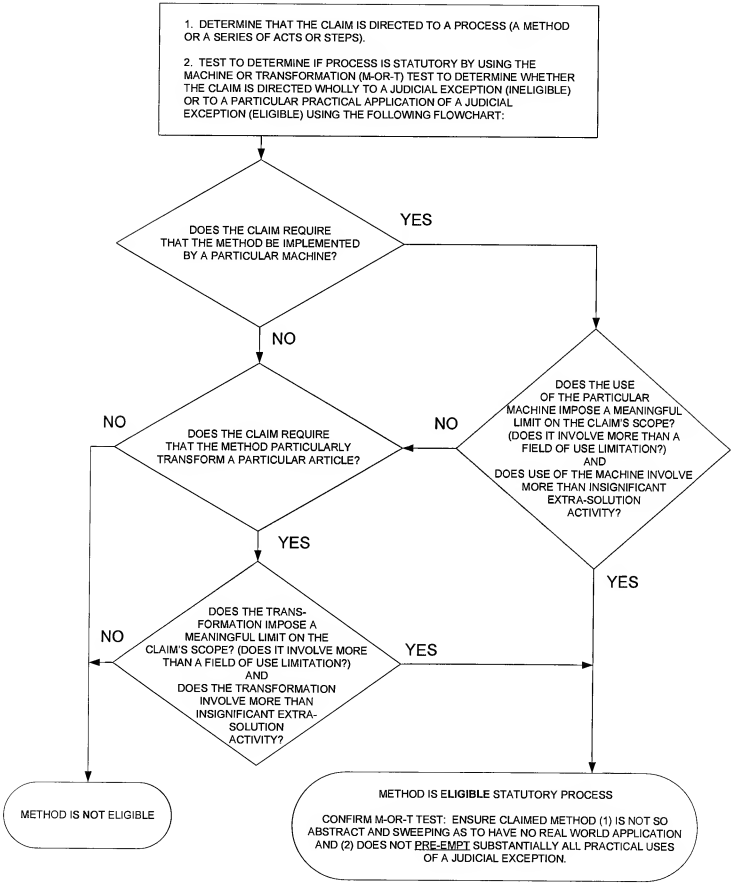
Confirm that the machine-or-transformation test was conducted correctly by considering whether the method is so abstract and sweeping as to have no real world application or pre-empts substantially all practical uses of a mathematical algorithm, a law of nature or a natural phenomenon. In either case, the claim would be ineligible and should not have passed the M-or-T test.

4. When the subject matter eligibility analysis is concluded, continue full examination on the merits of the claims, including evaluating utility under § 101, statutory and non-statutory double patenting, compliance with § 112, novelty under § 102, and non-obviousness under § 103.

SUBJECT MATTER ELIGIBLITY TEST



SUBJECT MATTER ELIGIBILITY TEST (M-OR-T) FOR PROCESS CLAIMS



INTERIM EXAMINATION INSTRUCTIONS FOR EVALUATING SUBJECT MATTER ELIGIBILITY UNDER 35 U.S.C. §101

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United States Patent and Trademark Office

IMPLEMENTATION PLAN

- OVERVIEW OF INTERIM EXAMINATION INSTRUCTIONS FOR SUBJECT MATTER ELIGIBLITY
- INSTRUCTIONS WILL BE POSTED ON USPTO INTERNET WEBSITE
- TC SPECIFIC TRAINING TO FOLLOW
- QUESTIONS SHOULD BE DIRECTED TO SPEs, THEN TO TC 101 REPRESENTATIVES

OVERVIEW

TRAINING OVERVIEW:

- THE TWO-STEP 101 ANALYSIS
- PRODUCT FLOWCHART AND EXAMPLES
- PROCESS FLOWCHART AND EXAMPLES

STEP 1

- Is the claim directed to one of the four patent-eligible subject matter categories?
  - Process, Machine, Manufacture, Composition of Matter

- If not in one of the four categories, the claim is not eligible.
  - Examples of claims that are not eligible:
    - Transitory signals *per se,* humans *per se,* a company *per se*, or a set of instructions *per se* (such as a game or software *per se)*

STEP 2

- A claim satisfying Step 1 is subject-matter eligible under 101 unless it wholly embraces a judicially recognized exception.

- Does the claim wholly embrace a judicially recognized exception?
  - Abstract Idea
  - Law of Nature
  - Natural Phenomena
  - The exceptions also include, for example:
    - Mental Processes
    - Mathematical Algorithms
    - Scientific Principles

➢ **If the claim is directed to a judicial exception itself, it is not eligible.**
➢ **A particular practical application of a judicial exception is eligible.**

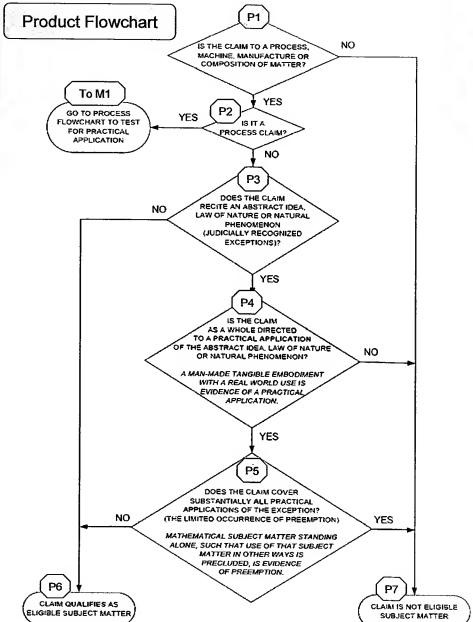
PRODUCT CLAIM ANALYSIS

- Begin with the broadest reasonable interpretation (BRI) of the claim in view of the specification consistent with the interpretation those skilled in the art would reach. MPEP 2111

- Product Focus:
  - Does the claim meet definitions of machine, manufacture or composition of matter?
  - Is there a judicial exception recited in the claim?

SUBJECT MATTER ELIGIBLITY TEST

Product Flowchart



PRODUCT EXAMPLE: CLAIM 1
No Judicial Exception

Claim 1. A hand tool, comprising:

- a handle; and
- a head coupled to the handle having a striking surface and a claw.

- Is the claim directed to a machine or manufacture? (P1)
  - YES - it is an article produced from prepared materials.
- Does it recite a judicial exception? (P3)
  - NO.

➢ The claim is **eligible** (P6).

PRODUCT EXAMPLE: CLAIM 2
Judicial Exception Claimed

Claim 2. A machine for evaluating search results, comprising:
- a microprocessor coupled to a memory,
- wherein the microprocessor is programmed to evaluate search results by:
  - sorting the results into groups based on a first characteristic;
  - ranking the results based on a second characteristic using a mathematical formula [f]; and
  - comparing the ranked results to a predetermined list of desired results to evaluate the success of the search.

- Is the claim directed to a machine? (P1)
  - YES - it is a concrete thing, consisting of parts.
- Does it recite a judicial exception? (P3)
  - YES - the ranking step includes a mathematical algorithm.
- Is it directed to a practical application? (P4)
  - YES - evidenced by the tangible embodiment of the microprocessor for evaluating search results, which is a real world use.
- Is the claim directed to substantially all practical applications of the mathematical algorithm? (P5)
  - NO – the algorithm is limited to use in evaluating search results in the particular claimed machine that is programmed to perform certain steps. As there are other ways to use the algorithm, for example, with different programmed steps, not every use is covered by the claim.

➢ The claim is **eligible** (P6).

PRODUCT EXAMPLE: CLAIM 3
Computer-Readable Medium

Claim 3. A non-transitory computer-readable storage medium with an executable program stored thereon, wherein the program instructs a microprocessor to perform the following steps:

- sorting results of a search into groups based on a first characteristic;
- ranking the results based on a second characteristic using a mathematical formula [f]; and
- comparing the ranked results to a predetermined list of desired results to evaluate the success of the search.

- Is the claim directed to a manufacture? (P1)
  - YES - it is an article (a non-transitory storage medium) produced from raw or prepared materials.
- Does it recite a judicial exception? (P3)
  - YES - it recites a mathematical algorithm.
- Is it directed to a practical application? (P4)
  - YES - evidenced by the tangible embodiment of the computer-readable storage medium.
- Is the claim directed to substantially all practical applications of the mathematical algorithm? (P5)
  - NO – there are other substantial uses of the algorithm than using it in evaluating search results in a program stored on the particular claimed manufacture. As there are other ways to use the algorithm, for example, with different programmed steps, not every use is covered by the claim.

➢ The claim is **eligible** (P6).

COMPUTER-READABLE MEDIA
Additional Information

- The functional/non-functional distinction is not an inquiry under 101. The 101 inquiry is whether a claim directed to one of the four statutory categories is wholly directed to a judicial exception.

- A tangible medium including a computer program should be evaluated to determine if there is a functional relationship between the computer program and the medium for purposes of distinguishing over prior art, not for subject matter eligibility.

PROCESS CLAIM ANALYSIS

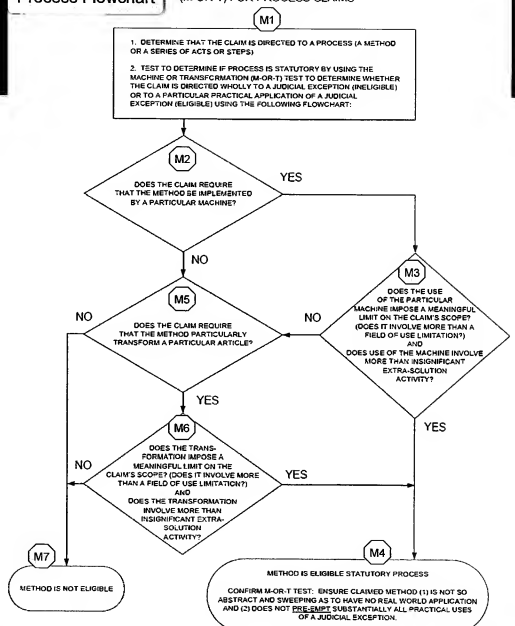
- Begin with the broadest reasonable interpretation (BRI) of the claim in view of the specification consistent with the interpretation those skilled in the art would reach. MPEP 2111.

- Process Focus:
  - Does the claim meet the machine or transformation (M-or-T) test? The claimed process must:
    - (1) be tied to a particular machine or apparatus, or
    - (2) particularly transform a particular article to a different state or thing.

    - Two corollaries: the particular machine or transformation must involve:
      - Meaningful limits
      - More than insignificant "extra-solution" activity

Process Flowchart

SUBJECT MATTER ELIGIBILITY TEST
(M-OR-T) FOR PROCESS CLAIMS



PROCESS EXAMPLE: CLAIM 4
No Machine or Transformation Claimed

Claim 4. A method of evaluating search results, comprising:

- sorting the results into groups based on a first characteristic;
- ranking the results based on a second characteristic; and
- comparing the ranked results to a predetermined list of desired results to evaluate the success of the search.

Under the BRI, each step could be done by hand or on a programmed computer.

- Is there a particular machine? (M2)
  - NO - there is no machine explicitly recited or inherently required
- Is there a transformation of an article? (M5) - NO

➢ Claim is **not eligible** (M7).

PROCESS EXAMPLE: CLAIM 5
Claim Tied to a Particular Machine

Claim 5. A method of evaluating search results, comprising:

- sorting the results into groups based on a first characteristic;
- ranking the results based on a second characteristic; and
- comparing, using a microprocessor, the ranked results to a predetermined list of desired results to evaluate the success of the search.

Under the BRI, the microprocessor must be programmed in a particular manner to perform the claimed comparing step.

- Is there a particular machine? (M2)
  - YES - under the BRI, the step of comparing requires a particularly programmed microprocessor.
- Does the machine impose a meaningful limit and is it more than insignificant extra-solution activity? (M3)
  - YES - the step of comparing is central to the method invented by applicant – it is not a mere field-of-use or insignificant extra-solution activity.

➢ The claim is **eligible** (M4).

PROCESS EXAMPLE: CLAIM 6
Extra-Solution Activity

Claim 6. A method of evaluating search results, comprising:

- obtaining the search results by electronically downloading the results from a database;
- sorting the results into groups based on a first characteristic;
- ranking the results based on a second characteristic; and
- comparing the ranked results to a predetermined list of desired results to evaluate the success of the search.

- Is there a particular machine? (M2)
  - YES - the step of obtaining the search results inherently requires a programmed microprocessor to download data from a database; under the BRI no other step requires a machine.
- Does the machine required for downloading impose a meaningful limit and involve more than insignificant extra-solution activity? (M3)
  - NO - the downloading step is not central to the purpose of the method invented by the applicant and is insignificant extra-solution activity.
- Is there transformation of an article? (M5)
  - NO

➢ The claim is **not eligible** (M7).

SUMMARY

- The Instructions supersede previous guidance on subject matter eligibility that conflicts with the Instructions, including MPEP 2106(IV), 2106.01 and 2106.02, as of 8/24/09.
  - To determine subject matter eligibility, follow the "Interim Examination Instructions for Evaluating Subject Matter Eligibility Under 35 U.S.C. § 101".
- Product claims are evaluated to determine if the claim is wholly directed to a judicial exception.
  - Functional/nonfunctional descriptive material (FDM/NFDM) is evaluated for patentable distinction over the prior art. See MPEP 2112.01(III).
- All process (method) claims are evaluated with the M-or-T test.

QUESTIONS

- TC SPECIFIC TRAINING WITH ADDITIONAL EXAMPLES WILL FOLLOW
- QUESTIONS SHOULD BE DIRECTED TO YOUR SPE, THEN TO THE FOLLOWING EMAIL HELP PANELS:
  - TC 1600: 101 Help-TC1600
  - TC 1700: 101 Help-TC1700
  - TC 3600: 101 Help-TC3600
  - TC 3700: 101 Help-TC3700
  - TC 2100: 101 Help-TC2100
  - TC 2400: 101 Help-TC 2400
  - TC 2600: 101 Help-TC2600
  - TC 2800: 101 Help-TC2800

THANK YOU

- The time code is ATRAIN-0000-090148.